## **CLAIMS**

- 1-20 (cancelled)
- 21. (new) A biomechanical stimulation device comprising:
  - a base plate;
  - a drive unit connected to said base plate;
  - a platform connected to said drive unit; and

wherein said drive unit is configured to move said platform in a first dimension substantially parallel to said base plate and a second dimension substantially perpendicular to said base plate, such that said platform moves within a two-dimensional plane substantially perpendicular to said base plate.

- 22. (new) The device of claim 21, wherein said drive unit is configured to move said platform in a circular motion.
- 23. (new) The device of claim 21, wherein said drive unit is configured to move said platform in an eliptical motion.
- 24. (new) The device of claim 22, wherein said circular motion is about an axis that is parallel to said base plate.
- 25. (new) The device of cliam 22, wherein said platform remains substantially parallel to said base plate during movement of said platform.
- 26. (new) The device of claim 21, wherein said drive unit moves said platform at a frequency between 5 Hz and 35 Hz.
- 27. (new) The device of claim 21 further comprising a control unit for controling frequencies of said platform movement.
- 28. (new) The device of claim 21 further comprising a pedestal connected to said base.

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- 29. (new) The device of claim 28 further comprising wheels connected to said pedestal.
- 30. (new) The device of claim 21 further comprising a plurality of openings in said platform.
- 31. (new) A method of biomechanical muscle stimulation comprising:
  providing a biomechanical stimulation device comprising a platform connected to a base;
  applying a body part muscle to said platform;

moving said platform within a two-dimensional plane substantially perpendicular to said base; and

wherein movement of said platform is driven by a drive unit connected to said base.

- 32. (new) The method of claim 31, wherein applying a body part to said platform includes applying a leg muscle to said platform.
- 33. (new) The method of claim 31, wherein applying a body part to said platform includes applying an arm muscle to said platform.
- 34. (new) The method of claim 31, wherein said platform is driven to move at a frequency between 5 Hz and 35 Hz.
- 35. (new) The method of claim 31, wherein said body part muscle is moved in the direction of the line of action of said muscle by said two-dimensional movement of said platform.

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